

Remarks and Arguments

Claims 1-31 have been canceled. New claims 32-51 have been added. It is believed that the claims do not incorporate any new matter.

It is believed that the claims are novel and non-obvious over the prior art, and in particular, over PCT publication WO 00/47107 (Pang), and U.S. Patent Nos. 6,936,043 (Peyman) and 6,443,976 (Flower) for the following reasons.

Independent claim 32 requires:

"...(ii) administering a treatment composition comprising a photodynamic agent . . .

(iii) after step (ii), applying energy to said blood vessel, of a type and in an amount sufficient to reduce the rate of blood flow through said blood vessel;

(iv) after step (iii), applying energy to said lesion, of a type and in an amount sufficient to excite said photodynamic agent." (emphasis added)P

This invention results in a number of benefits. "[B]y cutting off the blood flow to the lesion, once it has become at least partially filled with PDT agent, the PDT agent is physically held in the lesion for and during PDT". Incarceration of PDT agent in the lesion increases the concentration of PDT agent in the lesion during treatment. A higher concentration of PDT agent in the lesion allows for more effective treatment. (See paragraphs 16-18 of the application as published.)

Pang states that then existing technique of treating AMD routinely damage blood vessels and tissues unrelated to the disease or disease-causing areas. He discloses methods for treating neovascularizations that do not routinely damage blood vessels unrelated to the disease (see page 2

lines 22-36). Pang solves this problem through angiography and photocoagulation (page 3, lines 1-14). Pang further teaches the use of photodynamic therapy as an adjunct to photocoagulation. However, he does not recognize the problem that is solved by the current invention, namely the outflow of the photodynamic agent from the lesion resulting in a low concentration of photodynamic agent during therapy. He further does not recognize the solution to this problem, namely incarceration of the photodynamic agent in the lesion.

On pages 18-20, Pang describes methodology for locating vessels. On page 19, starting from line 10-35, he teaches treatment of the vessels by injecting a dye to increase the signal and laser absorption, and firing the laser (at no more than 1000mW) to cause thermal damage to the vessel (i.e., photocoagulation). Next, on page 21, he teaches photodynamic therapy (pages 21 -23) involving administration of a photodynamic agent and then irradiation (at less than 50mW) to activate the photodynamic agent. Thus, Pang teaches two distinct treatments, namely (a) administration of an agent for photocoagulation followed by irradiation sufficient for photocoagulation ("treatment sequence"), and (b) administration of an agent for photodynamic therapy followed by irradiation to activate the photodynamic agent ("PDT sequence"). There is no teaching or suggestion that either the PDT or treatment sequences should be anything less than distinct sequences. There is no teaching or suggestion in Pang to treat according to claim 1.

Peyman, like Pang, teaches treating patients with both photodynamic therapy and photocoagulation. Peyman defines PDT as administering a PDT agent and then activating it with low energy irradiation (column 2 line 2-8). Pang defines photocoagulation as direction of high energy light to new vessels. He teaches that the two therapies can be carried out in any order, spaced apart by various amounts of time including "essentially

simultaneously with or immediately thereafter". Peyman, however, does not teach that the steps of these two therapies should be intermixed. There is no teaching to perform the invention of claim 32, nor any suggestion that performance of the steps of the claim in the order specified would result in any benefit or improvement.

Flower ('976) teaches that certain treatment steps can be performed in any order. However, there is no teaching of the limitations of claim 32, nor any suggestion or motivation to order the treatment steps such that the benefits of the invention are achieved.

RECONSIDERATION

It is believed that all claims of the present application are now in condition for allowance.


Reconsideration of this application is respectfully requested. If the Examiner believes that a teleconference would expedite prosecution of the present application the Examiner is invited to call the Applicant's undersigned attorney at the Examiner's earliest convenience.

Any amendments or cancellation or submissions with respect to the claims herein is made without prejudice and is not an admission that said canceled or amended or otherwise affected subject matter is not patentable. Applicant reserves the right to pursue canceled or amended subject matter in one or more continuation, divisional or continuation-in-part applications.

To the extent that Applicant has not addressed one or more assertions of the Examiner because the foregoing response is sufficient, this is not an admission by Applicant as to the accuracy of such assertions.

Please grant any extensions of time required to enter this response and charge any fees in addition to fees submitted herewith that may be required to enter/allow this response and any accompanying papers to our deposit account 02-3038 and credit any overpayments thereto.

Respectfully submitted

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